

MEXPRESS

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REACH US AT



Mechanical Engineering Association
Department of Mechanical Engineering
KUMARAGURU COLLEGE OF TECHNOLOGY



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From the Editors...

Dear Readers,

Welcome to the latest edition of our departmental newsletter! This edition brings exciting news from our department.

Our esteemed faculty members have been actively engaged in organizing guest lectures, bringing in renowned experts to share their knowledge and insights with our students. These sessions have undoubtedly broadened perspectives and ignited curiosity within our classrooms.

We are immensely proud of our faculty's dedication to research and scholarship. Their recent publications in prestigious journals showcase the depth and significance of their ongoing work. Their contributions are pushing the boundaries of engineering knowledge and making a real-world impact.

Our faculty members are not only outstanding educators but also active participants in the wider engineering community. Their involvement in conferences, workshops, and industry collaborations reflects their commitment to continuous learning and knowledge exchange.

We are delighted to see our students actively engaging in scholarly pursuits and in internships. Their publications in research journals and conferences are a testament to their dedication and growing expertise in their chosen fields. In addition to scholarly pursuits, we commend our students for actively seeking real-world experience through internships. Their participation in various industries is instrumental in honing their practical skills and preparing them for successful careers.

We encourage you to delve deeper into the details of these achievements within the newsletter. We also welcome submissions from faculty and students for future issues. Feel free to share your research updates, project highlights, or any other news you believe will be of interest to the department.

Together, let's continue to foster a culture of learning, collaboration, and innovation within our department.

Happy Reading!

Warm regards,

Editors....



GUEST LECTURES ORGANIZED:



Guest lecture on "Tamil and Technology" was organized on 19-01-2024. **Dr. P. Ramesh**, Associate Professor, Government Arts college, Thondamuthur, Coimbatore was the resource person. **Dr. P.R. Ayyappan**, Senior Assistant Professor coordinated the event.

FACULTY PUBLICATIONS:

Dr. V. R. Murugantham, Associate Professor, published his paper entitled "An Automated Headlamp Alignment Checking System for Commercial Vehicles Using Machine Vision Technology, Volume 10 Issue 5, in the Scopus indexed International Journal for Science and Advance Research in Technology.



Dr. B. N. Sreeharan, published a paper entitled "Sensor Technologies in Industrial Incinerators" in IEEE Xplore, a Scopus indexed journal. He also published another paper titled "Experimental Investigation of Fused Deposition Modelling Process Parameters to Optimize the Fabrication of Connecting Rod Bush" in the MS Ramaiah Management Review journal, 14, 02 (Dec. 2023), 1-11.

FACULTY PARTICIPATIONS:

Dr. P. R. Ayyappan, Senior Assistant Professor, participated in an Online FDP on "Pioneering the Future of Blockchain Technology" from 29-04-2024 to 03-05-2024 organized by National Institute of Technology, Tiruchirappalli.



Dr. S. Thirumurugaveerakumar, Associate Professor, participated in a STTP on "Computational Fluid Dynamics and Heat Transfer" from 28-04-2024 to 04-05-2024 organized by Kumaraguru College of Technology.

Dr. N. Sangeetha, Senior Associate Professor, completed an online NPTEL Course on "Design of Mechanical Transmission Systems" from 22-01-2024 to 06-04-2024. She also participated in an online Workshop on "Academic and Administrative Audit in HEI's" on 30-04-2024 organized IOT Academy.



Department Activities



Dr. M. Balaji, Associate Professor, participated in an International Conference on “Recent Innovations in Production Engineering (RIPE - 2024) from 30-05-2024 and 31-05-2024 organized at MIT Campus, Anna University, Chennai – 44.

Dr. K. K. Arun, Assistant Professor III, completed following online courses through Coursera from 22-04-2024 to 20-05-2024: (1) “Introduction to solar cells” (2) “Introduction to Thermodynamics: Transferring Energy from Here to There” (3) “How Things Work: An Introduction to Physics”



Dr. P. S. Samuel Ratna Kumar, Assistant Professor – III participated in an online International Conference on “Advanced Technology - ICAT 2024” from 30-04-2024 to 01-05-2024, organized by KCT & University of Johannesburg.

Dr. B. N. Sreeharan, Assistant Professor – III, completed an online course on “The creating dynamic learning activities quizz learning path” on 31-05-2024.



STUDENT PUBLICATIONS:

Mr. S. V. Nithesh (20BME080) and **Mr. K. T. Imayan** (20BME045) published their paper titled “Experimental Investigation of Fused Deposition Modelling Process Parameters to Optimize the Fabrication of Connecting Rod Bush” in the MS Ramaiah Management Review journal, 14, 02 (Dec. 2023), 1–11 under the guidance of Dr. B. N. Sreeharan, Assistant Professor - III.

Mr. P. Sudalaimuthu Suresh (20BME112) and their team published their paper entitled “Sensor Technologies in Industrial Incinerators” in IEEE Xplore, a Scopus indexed journal under the guidance of Dr. B. N. Sreeharan, Assistant Professor - III.

STUDENT INTERSHIPS:

Mr. G. Shriman (22BME100) and **Mr. A. Yuvanshankkar** (22BME127) underwent an internship at M/s. Uno Minda Limited, Hosur from 02-05-2024 to 10-05-2024.

Mr. B. Sanjay (22BME085) has completed the internship in M/s. Titan Company Limited, Hosur from 25-04-2024 to 10-05-2024.



KUMARAGURU
college of technology

COIMBATORE – 641 049

Department of Mechanical Engineering

INSTITUTE VISION:

The vision of the college is to become a technical university of International Standards through continuous improvement.

INSTITUTE MISSION:

Kumaraguru College of Technology (KCT) is committed to providing quality Education and Training in Engineering and Technology to prepare students for life and work equipping them to contribute to the technological, economic, and social development of India. The College pursues excellence in providing training to develop a sense of professional responsibility, social and cultural awareness and set students on the path to leadership.

DEPARTMENT VISION:

To emerge as a centre, that imparts quality higher education through the programme in the field of Mechanical Engineering and to meet the changing needs of the society.

DEPARTMENT MISSION:

The department involves in sustained curricular and co-curricular activities with competent faculty through teaching and research that generates technically capable Mechanical Engineering professionals to serve the society with delight and gratification.

B. E. MECHANICAL ENGINEERING

PROGRAM EDUCATIONAL OUTCOMES (PEO's):

- PEO 1 :** Graduates will take up career in manufacturing and design related disciplines.
- PEO 2 :** Graduates will be involved in the execution of Mechanical Engineering projects.
- PEO 3 :** Graduates will take up educational programme in mastering Mechanical sciences and management studies.

PROGRAM OUTCOMES (PO's):

1. **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

2. **Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. **Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
4. **Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
5. **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
6. **The engineer and society:** Apply reasoning informed by contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
7. **Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. **Individual and teamwork:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
11. **Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
12. **Life-long learning:** Recognize the need for and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PROGRAM SPECIFIC OUTCOMES (PSO's):

1. Apply the fundamentals of science and mathematics to solve complex problems in the field of design and thermal sciences.
2. Apply the concepts of production planning and industrial engineering techniques in the field of manufacturing engineering.

M. E. INDUSTRIAL ENGINEERING

PROGRAM EDUCATIONAL OBJECTIVES (PEO's):

- PEO 1 :** Graduates will be mid to higher level management / engineering professionals with responsibilities in engineering management, data analysis and business operations.
- PEO 2 :** Graduates will be engineering professionals, and technology leaders who would manage such functions as plant engineering, production, supply chain and quality management.
- PEO3 :** Graduates would function as educators or researchers in academic institutions.

PROGRAM OUTCOMES (PO's):

- P01 :** An ability to independently carry out research /investigation and development work to solve practical problems.
- P02 :** An ability to write and present a substantial technical report/document.
- P03 :** Students should be able to demonstrate a degree of mastery over the area as per the specialization of the program. The mastery should be at a level higher than the requirements in the appropriate bachelor program.
- P04 :** Apply knowledge and competencies in manufacturing, analytics, supply chain, quality and engineering management.
- P05 :** Apply principles of industrial engineering to solve problems in industry.
- P06 :** An ability to work as part of interdisciplinary teams, communicate effectively, model and design engineering systems optimally.